

An Interdisciplinary Approach to Biological Sciences
IABS 2023, 1-3 February, 2023
Indian Association for the Cultivation of Science, Kolkata, India



Day 1 (1st February, 2023)

Time	SPEAKER/SESSION TITLE/TOPIC	
8:00-9:00	Registration/Poster set up (In front of MLS Hall)	
9:00-9:30	Inaugural Session: by IACS Director, Prof Tapas Chakraborty (MLS HALL)	
	Session1: Mechanobiology, Chairs: Profs. M J. Schellenberg and R. Mukhopadhyay	
9:30-9:55	(L1) Mechanobiology of the Nucleus: from Matrix & Development to Cancer	Dr. Dennis E. Discher
9:55-10:20	(L2) Mechanical responses of axons	Dr. Pramod A Pullarkat
10:20-10:45	(L3) Faithfully promiscuous - a twist in the tail for dynein function during mitosis	Dr. Sivram V S Mylavarapu
10:45-11:00	(L4) Understanding the role of macromolecular crowding and TNFR1 clustering in cell volume regulation	Dr. Deepak Sinha
11:00-11:20	Tea/ coffee Break (Adjacent to MLS Hall)	
	Session 2: Cell Signalling 1, Chairs: Profs. P Janscak and A. Bandopadhyay	
11:20-11:45	(L5) Molecular Basis of Allosteric Regulation and Isoform Specificity of Protein Kinase C Beta	Dr. Matthew J. Schellenberg
11:45-12:10	(L6) Disruption of chromatin remodelling leads to chemosensitivity and adjunct therapy in colon cancer	Dr. Sagar Sengupta
12:10-12:35	(L7) RTEL1 helicase regulates homologous recombination during DNA replication	Dr. Ganesh Nagaraju
12:35-13:00	(L8) Non-Duplex DNA Structure takes Centrestage: Telomere-dependent Tumor Immunosuppression	Dr. Shantanu Chowdhury
13:00-13:15	(L9) Immunomodulatory potential of coagulation factors in cancer immune evasion	Dr. Prosenjit Sen
13:15-15:00	Lunch (Food Court)	
15:00-17:30	POSTER SESSION I + Tea/coffee (Centenary Building 1st floor)	
	Session 3: Cell Signalling 2, Chairs: Profs. I. Rosenshine and D. Chattopadhyay	
17:30-17:55	(L10) Clotting proteases facilitate intercellular communication via the release of extracellular vesicles	Dr. L. Vijaya Mohan Rao
17:55-18:20	(L11) Emerging roles of vitronectin in human MSCs under different microenvironment stress conditions	Dr. Malancha Ta
18:20-18:45	(L12) MLL regulates transcription of non-coding RNA in repeat regions	Dr. Sweta Tyagi
18.45-19:10	(L13) Engineered genome editors for therapeutic correction	Dr. Debojyoti Chakraborty
19:10-22:00	Dinner (Food Court)	

Day 2 (2nd February, 2023)

2	Session 4: Chromatin Biology, Chairs: Profs. P K Maiti and S Ben-Yehuda		
	9:00-9:25	(L14) Mechanistic insights into resolution of transcription-induced replication stress	Dr. Pavel Janscak
	9:25-9:50	(L15) Meddling with topology modulators of the pathogen and reprogramming of host epigenetics impact intracellular survival of Mycobacterium tuberculosis	Dr. V. Nagaraja
	9:50-10:15	(L16) Cracking the secondary DNA code of supercoiling, looping, and counterions	Dr. Lynn Zechiedrich
	10:15-10:40	(L17) Extracellular Vesicles associated miRNAs in action: Mechanism of packaging, transport, and delivery	Dr. Suvendra Bhattacharyya
	10:40-10:55	(L18) Mito-targeted Irinotecan induced selective poisoning of mitochondrial Topoisomerase 1 (Top1mt) promotes tumor regression through nuclear perturbation	Dr. Benu Brata Das
	10.55-11:20	Tea/ coffee Break (Adjacent to MLS Hall)	
	Session 5: Host and microbes, Chairs: Prof. S. Roy and U. Bandyopadhyay		
	11:20-11:45	(L19) Adaptation of enteropathogenic E. coli to life on the epithelium surface	Dr. Ilan Rosenshine
	11:45-12:10	(L20) Discovery of a novel phylogenetically restricted mitotic progression factor in the human pathogen Candida albicans	Dr. Kaustuv Sanyal
	12:10-12:35	(L21) Dormant bacterial spores encrypt a long-lasting transcriptional program to be executed during revival	Dr. Sigal Ben-Yehuda
	12:35-1:00	(L22) The enigmatic lifestyle of jumbo bacteriophages and their evolution	Dr. Sutharsan Govindarajan
	13.00-13:15	(L23) Novel regulator of bacterial motile sessile transition	Dr. Ritesh R Pal
	13.15-14.30	Lunch (Food Court)	
	Session 6: In silico, Chairs: Profs. L. Zechiedrich and V. Nagaraja		
	14:30-14:55	(L24) In vitro Reconstitution and Computational Modeling of Oscillatory wave-like Patterns in Microtubules driven by Collective Dynein Mechanics	Dr. Chaitanya A. Athale
	14:55-15:20	(L25) Electrical conductance of DNA/RNA: a marker to detect intercalators, Oxidative damage and conformational changes	Dr. Prabal K. Maiti
	15:20-15:45	(L26) Growth kinetics of cellular aggregation process	Dr. Rumi De
	15:45-16.00	(L27) Modeling mitosis under confinement	Dr. Raja Paul
	16:00-16:25	(L28) Importance of Metastable Conformational States in Proteins: From Function to Drug Discovery	Dr. Suman Chakrabarty
	16:25-16.40	(L29) How prepared are we for the next pandemic? Aiding computational drug discovery with deep learning methods	Dr. Partha Basuchowdhuri
	16.40-22:00	Conference Dinner (Outside IACS)	

Day 3 (3rd February, 2023)

3	Session 7: Drug design and delivery, Chairs: Profs. P. K. Das and LVM Rao	
	9:00-9:25	(L30) Regulation of cysteine synthesis in Mtb Dr. Vinay Nandicoori
	9:25-9:50	(L31) Genome plasticity and antimicrobial resistance in bacterial pathogens Dr. Bhabatosh Das
	9:50-10:15	(L32) Knocking Down Barriers: Advances in Morpholino Antisense Delivery In vitro and In vivo Dr. Surajit Sinha
	10:15-10:40	(L33) A dysregulated PTEN/AKT signalling is allied with stemness and poor therapeutic response in the subtypes of Breast Cancer Dr. Fayaz Malik
	10:40-10:55	(L34) Road-blocker HSP disease mutation disrupts pre-organization for ATP hydrolysis in kinesin through a second sphere control Dr. Biman Jana
	10:55-11.15	Tea/ coffee Break (Adjacent to MLS Hall)
	Session 8: Gene regulation, Chairs: Profs. A. Banerjee and Dr SS Roy	
	11:15-11:40	(L35) Membrane compartmentalization of NuMA/dynein/dynactin and Ect2/Cyk4/Mklp1 regulates chromosome segregation and cleavage furrow formation Dr. Sachin Kotak
	11:40-12:05	(L36) Molecular insights on the extracellular matrix remodelling by epigenetic regulator UBR7 in triple negative breast cancer Dr. Chandrima Das
	12:05-12:30	(L37) Mechanistic understanding of dynamic regulation of Super Elongation Complex (SEC) functions for global transcriptional downregulation during genotoxic stress Dr. Debabrata Biswas
	12:30-12:55	(L38) NAD ⁺ at the crossroads: exploring the role of PARP inhibitors in rotenone-induced neurodegeneration Dr. Piyali Mukherjee
	12:55-13:10	(L39) Effect of fluid shear stress on human breast cancer cells Dr. Siddhartha S Jana
	13:10--15:30	Lunch (Food Court) + POSTER SESSION II (Centenary Building 1st floor)
	15:30-16:00	Panel Discussion: (MLS Hall)
	16:00-17:00	Poster Prize and Concluding Session Valedictory (PS) and High Tea